JVC

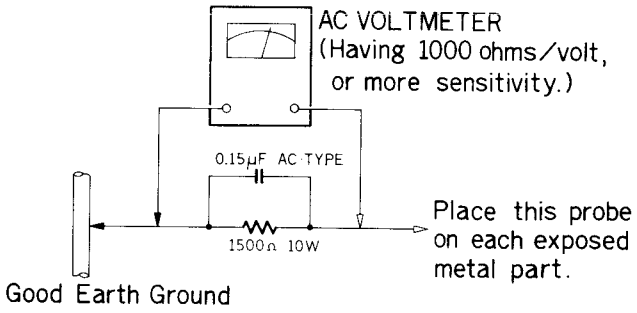
SERVICE MANUAL

MODEL
QL-F300
QUARTZ LOCKED
FULLY-AUTOMATIC
TURNTABLE

No. 2650
January 1983

Safety Precaution

1. The design of this product contains special hardware, many circuits and componets specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.
5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



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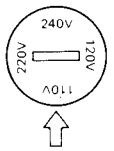
CHECKING YOUR LINE VOLTAGE (For U.S. Military Market and Other Countries)
Before inserting the power plug, please check this setting to see that it corresponds with the line voltage in your area. If it doesn't, be sure to adjust the voltage selector switch to the proper setting before operating this equipment. The voltage selector switch is located underneath the platter on the cabinet.



CAUTION Before selecting the "Voltage selector swtich" to proper voltage disconnect the power plug.

1. Specifications

MOTOR AND PLATTER

Drive system	: Quartz locked fully-automatic turntable
Driver Motor	: DC servomotor
Speeds	: 33-1/3 and 45 rpm
Wow and Flutter	: Less than 0.025% (WRMS), 0.045% (DIN)
Signal to Noise Ratio	: Better than 78 dB (DIN-B)
Platter	: 12-inch (30 cm) diameter die-cast aluminium alloy

TONEARM

Type	: Statically balnaced straight tubular arm with JVC developed TH (Tracing Hold) balancing system and tracking force dial graduated in 0.1 gram steps.
Effective Arm Length	: 220 mm
Overhang	: 15 mm
Applicable Tracking Force Range	: 0 to 3 grams
Applicable Cartridge Weight	: 9.0 to 12.5 grams (including headshell)
Headshell Weight	: 4.5 grams

CARTRIDGE (Except the QL-F300 for U.S.A. and Canada)

Type	: Moving magnet (MD1055II)
Stylus	: 0.6 mil. diamond for DT-55II
Optimum Tracking Force	: 1.75±0.25 grams
Output	: 2.5 mV (1 kHz)
Frequency Response	: 10 to 25,000 Hz
Separation	: Better than 25 dB (1 kHz)
Load Resistance	: 47 kohms
Compliance	: 25×10^{-6}cm/dyne (Static) 8×10^{-6}cm/dyne (100 Hz Dynamic)

GENERAL

Dimensions	: 43.5(W)×36.0(D)×10.5(H) cm
Net Weight	: 5.2 kg (11.5 lbs)

POWER SPECIFICATIONS

Countries	Line Voltage & Frequency	Power Consumption
U.S.A. & CANADA	AC 120 V, 60 Hz	9 watts
CONTINENTAL EUROPE	AC 220 V∿, 50 Hz	
U.K. & AUSTRALIA	AC 240 V∿, 50 Hz	
U.S. MILITARY MARKET	AC 110/120/220/240 V∿ selectable, 50/60 Hz	
OTHER AREAS	AC 110/120/220/240 V∿ selectable, 50/60 Hz	

Design and specifications subject to change without notice.

2. Operation of Automatic Mechanism

2-(1) Start/stop Mechanism

1. Start

If you press the START/STOP button when the tonearm is on the rest, the mechanism operates as described below to turn ON the turntable's power and prepare to move the tonearm to the predetermined position on the record. Operation (See Fig. 1).

When the start rod is pushed in direction "a", the slider moves in direction "b". During this time, cam (D) of the slider pushes part (C) of the off lever, which is in turn rotated in direction "d", thus unlocking boss (E) of the switch lever. Thereby, the microswitch switches ON to rotate the platter. On the other hand, as cam (B) of the slider pushes part (A) of the reject lever in direction "c", the trip lever is driven in direction "e". The trip lever drives the engagement in direction "f". As a result, the platter spindle gear engages with the main gear and the "change cycle" starts.

Fig. 2 shows the state at the end of the above operation.

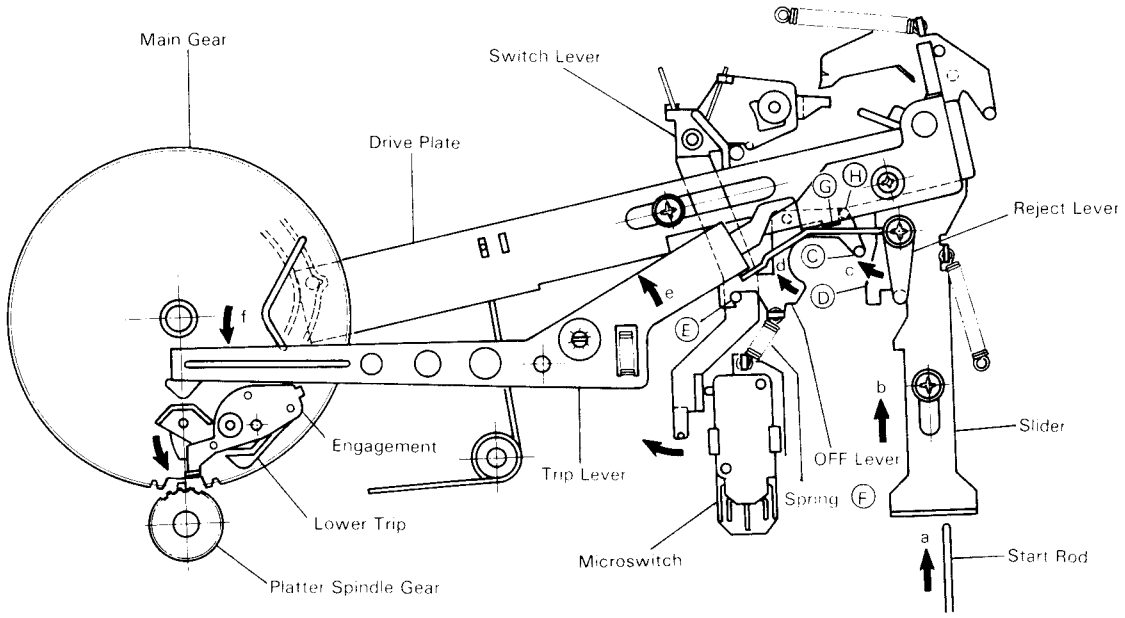


Fig. 1

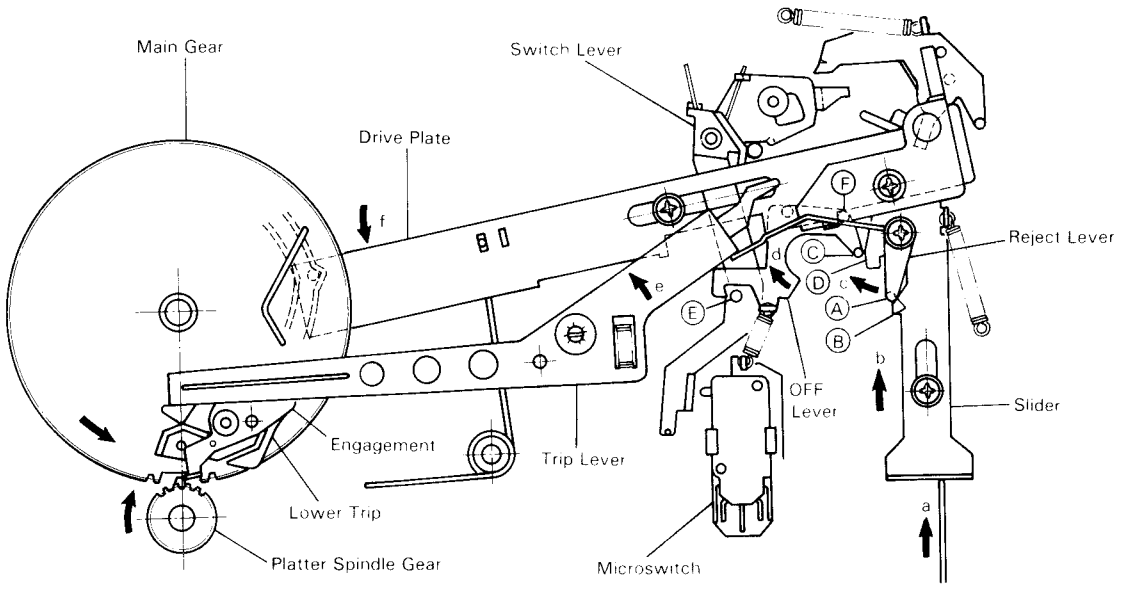


Fig. 2

2. Stop

Stop operation starts if the START/STOP button is pressed when the tonearm is in the "play" position (not on the rest).

Operation (See Fig. 2).

When the slider moves in direction "b", part (C) of the off lever is pushed. During this time, the switch lever is not driven with its boss (E) unlocked and the reject lever alone is pushed in direction "c". In this way, the trip lever is driven and the "change cycle" starts.

In the change cycle, the off lever prepares for locking boss (E) of the switch lever by spring (F). At the end of the change cylce, boss (H) of the off lever is pushed by part (G) of the drive plate. In this way, the switch lever returns to its initial position and the microswitch switches OFF. The series of operation ends in this condition.

2-(2) Lead-in Mechanism

When the change cycle starts and the main gear rotates, the drive plate is moved to rotate the elevator cam as shown in Fig.3.

As the elevator cam rotates with the linear motion of drive plate in direction "a", the elevator is pushed up by the sloping part of the elevator cam to lift the tonearm, at this motion the lead-in lever moves from the position as shown in Fig.4 to the position as shown in Fig.5.

At the end of the linear motion of the drive plate in direction "a", stud B (mold) of the lead-in lever enters the cam hole in the chassis base, then the lead-in lever rotates in direction "c", and arm lever stud (A) is holded between lead-in lever and case as shown in Fig. 5, and the drive plate moves in direction "b". Arm lever stud (A) moves with the drive plate to move the tonearm onto the record.

According the SIZE button setting (17 or 30 cm), the tonearm will be moved to the predetermined position on the record. Part (C) of the arm lever (See Fig. 6) contacts the index stopper (17 or 30 cm) and this determines the lead-in position, then the lead-in lever returns in direction to the initial position.

To adjust the arm lever position (lead-in position), screw the eccentric adjuster.

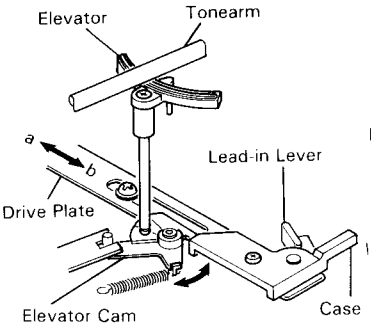


Fig. 3

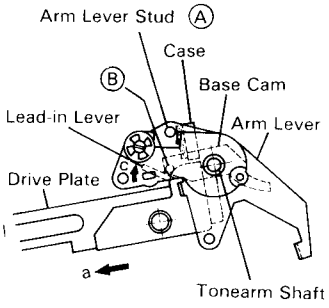


Fig. 4

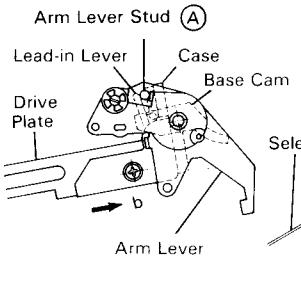


Fig. 5

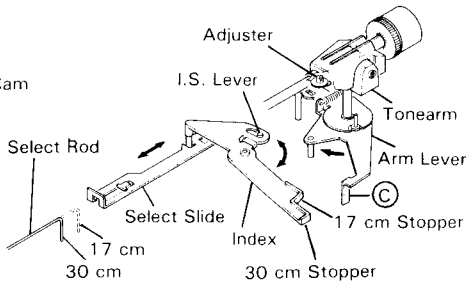


Fig. 6

2-(3) Change Cycle Start Mechanism

During play, the relationship between the main gear notch and the platter spindle gear is as shown in Fig. 7. Since the projection is apart from the engagement, the main gear is stationary even when the platter is rotating. As play proceeds, the arm lever pushes the trip lever and this moves the lower trip which, in turn, gradually drives out the engagement mounted on the lower trip. The relationship between the engagement and the projection at this time is as shown in Fig. 8. When the pitch of the record groove is small, the pitch of engagement advance is also small and the engagement will be pushed by the projection. The main gear, therefore, remains stationary.

At the end of play, when the tonearm comes to the leadout groove having a larger pitch, the engagement advances more than the projection pushes it back and their relationship is now as shown in Fig. 9. The projection pushes the engagement, the main gear starts to turn, the main gear notch moves and the platter spindle gear engages with the main gear. Thus, the change cycle starts as the main gear starts to turn.

When the main gear stops turning, the relationship shown in Fig. 7 is restored and the main gear remains stationary even when the platter spindle gear turns.

On the other hand, the driven out engagement and lower trip are pushed back to their initial positions by the edge of the platter spindle gear just before the main gear stops turning. The cam of the main gear pushes the trip lever back to its initial position earlier than the engagement and lower trip. The return position can be fine-adjusted to start earlier or later by screwing the adjuster.

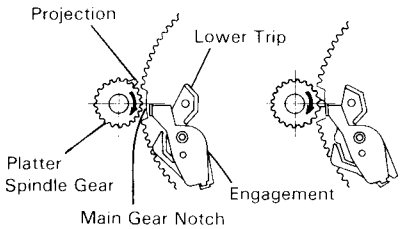


Fig. 7

Fig. 8

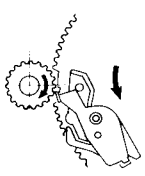


Fig. 9

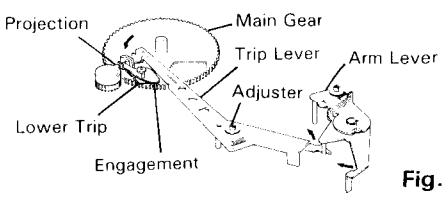


Fig. 10

2-(4) Repeat Mechanism

When the REPEAT knob is turned ON, the slider is placed in the position (where the slider contacts the stopper at part "A") shown in Fig. 11 and the mechanism operates to lead in the tonearm repeatedly to the same position. As the repeat rod moves in direction "a", the slider moves in direction "b" and stays there.

If the change cycle starts in this state, the lead-in lever turns in direction "c" and moves with arm lever stud (A). As the drive plate moves, the tonearm will be driven in direction "d" to perform the lead-in operation.

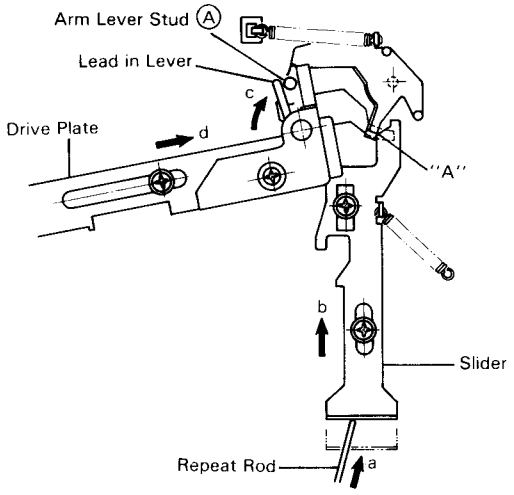


Fig. 11

3. Removal and Reassembly Procedure

3-(1) Removel of Cabinet

1. Remove feet (1) ~ (4) shown in Fig. 12.
2. Remove the cord stopper (5) of the signal cord as shown in Fig.12.
3. Remove the head shell and main weight from the tonearm.
4. Move the tonearm in direction of the center spindle as shown in Fig.13.
5. Life the cabinet up, then remove the cabinet.
   Note: When the cabinet touches the tonearm, this may damage the tonearm and the cabinet.

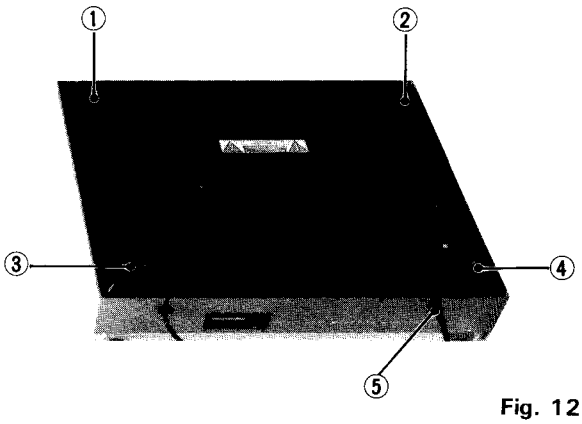


Fig. 12

3-(2) Reassembly of Cabinet

1. Set the operation switches on the front as follows:

Operation switch	Setting
SIZE	30
REPEAT	OFF
CUEING	DOWN

2. Set the tonearm as in Fig. 13.
3. Reassemble the cabinet.
   Note: When remouting the feet (1) - (4), mount the feet having slipproof at the front side.

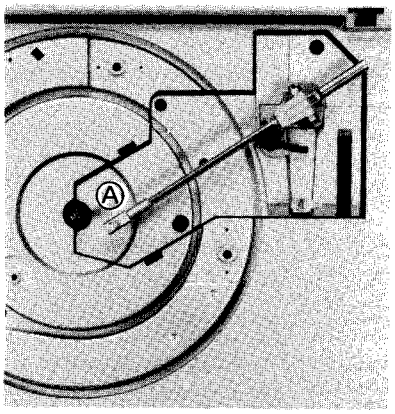


Fig. 13

3-(3) Removal of Pickup Base Ass'y

1. Remove the anti-skating cover as shown in Fig. 14.
2. Remove scress ① - ⑤ as shown in Fig. 15.

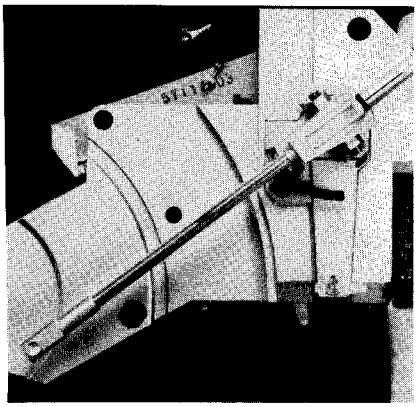


Fig. 14

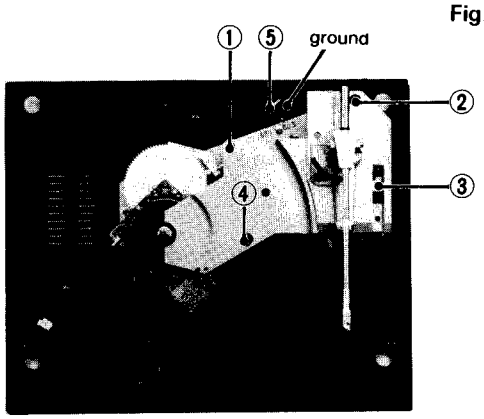


Fig. 15

3-(4) Reassembly of Pickup Base Ass'y

1. Push the switch lever by top of the finger as shown in Fig. 16, then mount the pickup base ass'y.
   So that, the stad of the arm lever is located as shown in Fig. 17.

Note : Check the ground as shown in Fig. 15 to keep away from the arm lever.

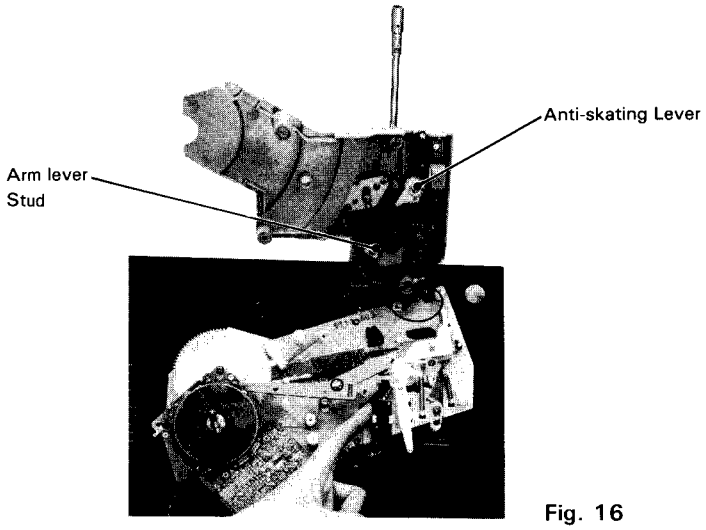


Fig. 16

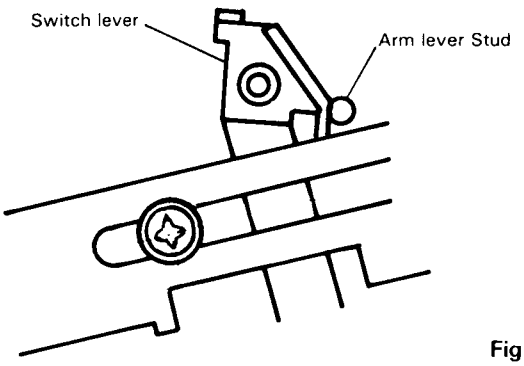


Fig. 17

3-(5) Reassembly of Anti-skating Lever

When mounting the anti-skating lever, set the anti-skating knob to "0" position.

4. Stylus Replacement (DT-55Ⅱ)

Replacement of the stylus can normally be done easily by removing the worn stylus from the cartridge body and replacing it with a new stylus as shown in Fig. 18.

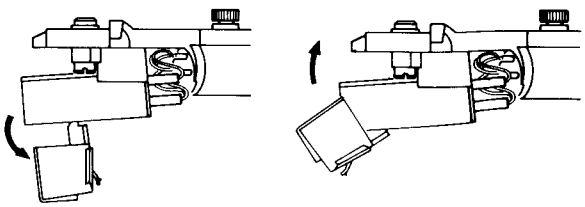


Fig. 18

5. Cartridge Mounting

5-(1) Removal and mounting of the headsheel (Fig. 19)

Turn the connector screw in direction "A" to remove the headshell from the tonearm. Fix it firmly when mounting the headshell.

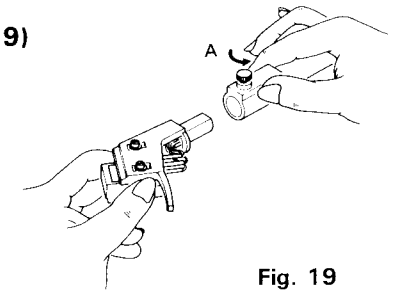


Fig. 19

5-(2) Mounting Cartridge (Fig. 20)

1. Remove the 2 screws securing the cartridge to the headshell.
2. Install the cartridge onto the headshell provided.
3. The four headshell lead wires are colour-coded as follows; connect them correctly :

   White(+) .....L Red(+) .....R
   Blue(−) .....LE Green(−) .....RE
   (Left) (Right)

4. Mount the cartridge onto the headshell correctly and leave the screws slightly loose, then, after completing the "overhang adjustment", tighten them firmly.
5. After cartridge replcement, be sure to perform the "tracking force" and "anti-skating" adjustment.

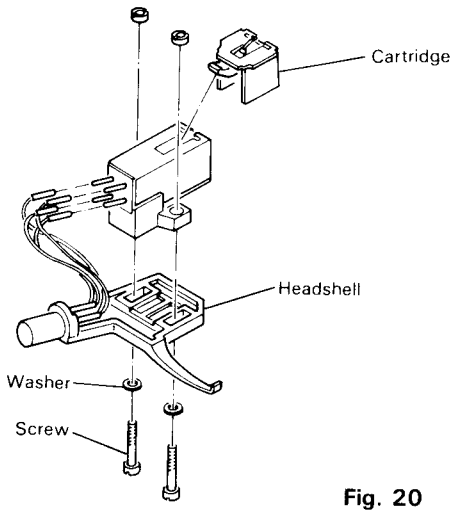


Fig. 20

6. Adjustment

6-(1) Tracking Force Adjustment

1. Remove the stylus cover.
2. Slide the anti-skating knob to align its index mark with the "0" mark. (Fig. 21)
3. Slide the counterweight to the middle of the weight shaft and turn until the tonearm is balanced with the stylus nearly touching the record surface. (Fig. 25, 26)
4. Hold the counterweight at the adjusted position and turn the tracking force dial until the "0" mark is aligned with the index line on the tonearm weight shaft. (Fig. 22)
   * It is most important to obtain the correct tracking force.
5. Turn the counterweight in the direction 0-1-2 until the "1.75" (for the JVC MD1055Ⅱ) mark on the tracing force dial is aligned with the index line. (Fig. 22)
   * Be careful not to touch the tracking force dial when turning the counterweight.
   * Turning the tracking force dial alone has no effect on the tracking force.
6. Slide the anti-skating knob until the index mark of the knob points to "1.75" (JVC MD1055Ⅱ) mark (Fig. 24) Use the ● marked scale when using a conical stylus. Use the ▬ marked scale for an elliptical stylus or a SHIBATA stylus.

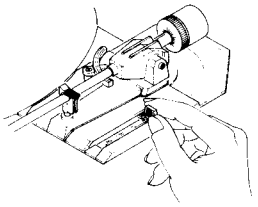


Fig. 21

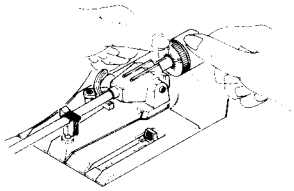


Fig. 22

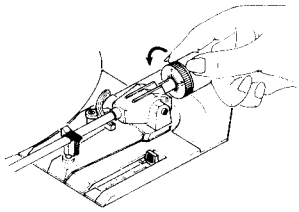


Fig. 23

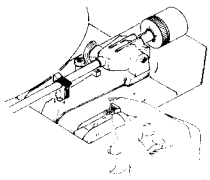


Fig. 24

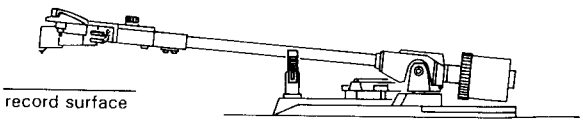


Fig. 25

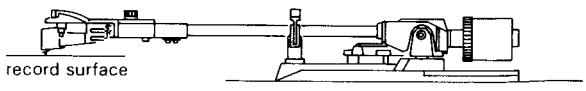


Fig. 26

6-(2) Overhang Adjustment (Fig. 27)

Adjust the overhang as shown, aligning the center lines of the cartridge and the headshell. Leave 32 mm between the stylus tip and the edge of the headshell as shown. An error of ±1 mm will not degrade performance.

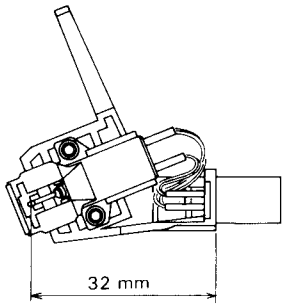


Fig. 27

6-(3) Tonearm Elevator-height Adjustment (Fig. 28)

The optimum clearance between the stylus tip and the platter mat is about 8 mm when the tonearm is resting on the tonearm elevator (with the UP/DOWN knob switched to the UP position). Turning the adjusting screw clockwise lowers the height of the tonearm elevator and turning it counterclockwise increases it.

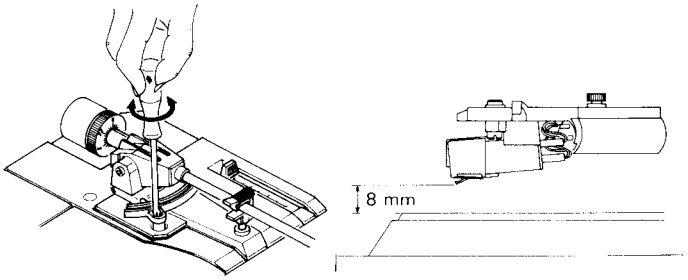


Fig. 28

6-(4) Lead-out Adjustment (Fig. 29)

Be sure to perform this adjustment posterior to the lead-in adjustment.

- When auto-return functions too late, turn the screw counterclockwise with a screwdriver.
- When auto-return functions too early, turn the screw clockwise.

When using test record, confirm the autoreturn functions as follows.

Test record	Auto-return function
RG652	To be returned
RG653	Not to be returned

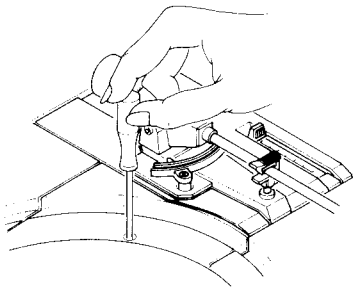


Fig. 29

6-(5) Lead-in Adjustment

The QL-F300 is shipped from the JVC factory with the lead-in positions adjusted correctly. However, if the stylus lead-in positions are to be changed because the cartridge or head-shell has been changed, etc., adjust in the following manner:

When using test record (RG-325).

Record size	Counter's numbers
30 cm	7 ~ 29
17 cm	5 ~ 34

Note: When completing this adjustment, be sure to check the lead-out position.

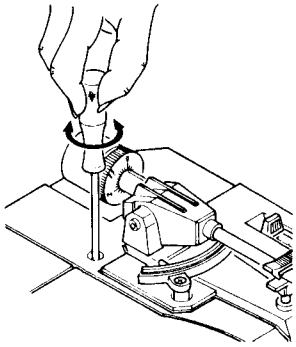


Fig. 30

7. Exploded Views and Parts List

7-(1) Mechanism Assembly

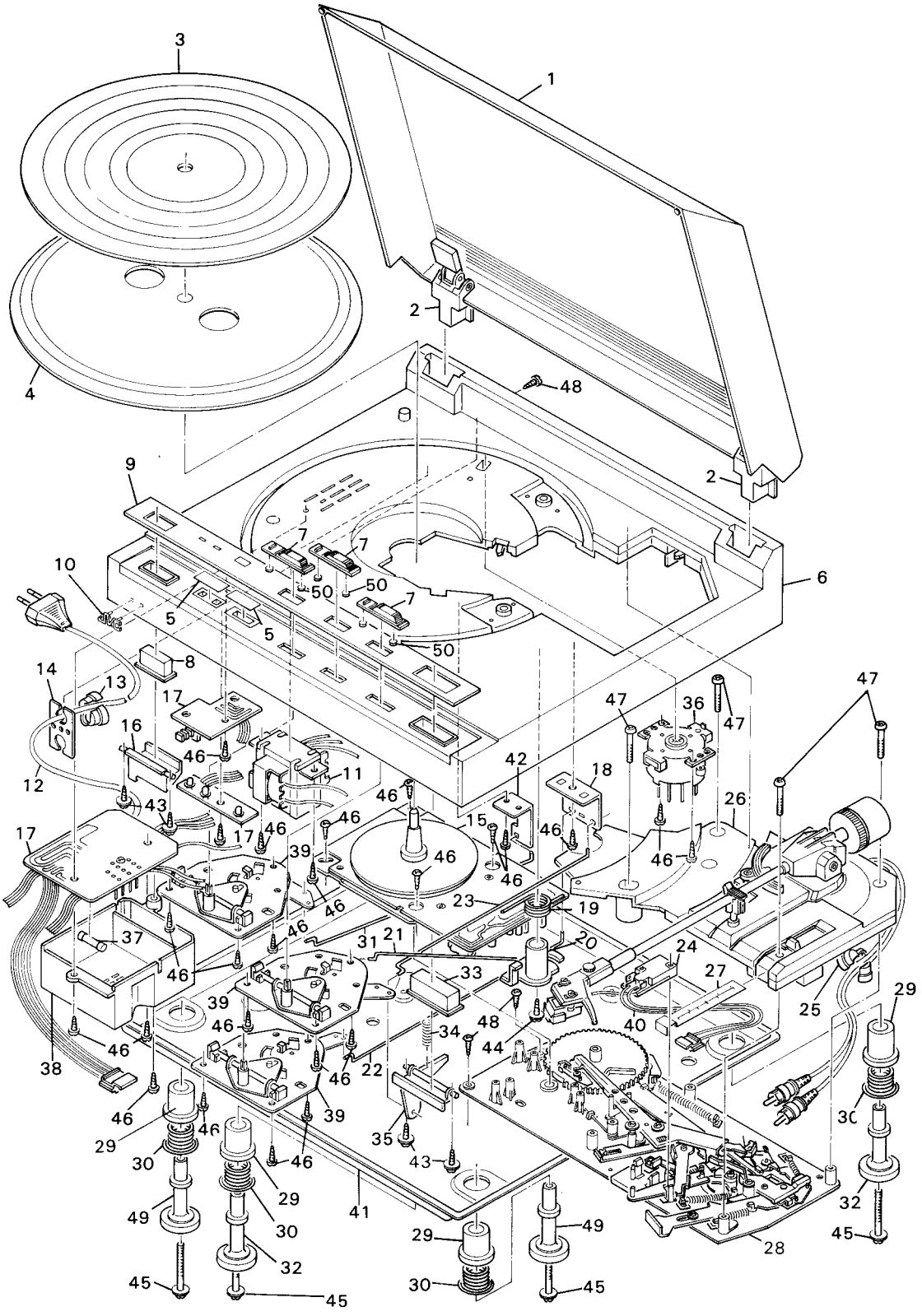


Fig. 31

Parts List

Item No.	Part Number	Description	Q'ty
1	E10823-001	Dust Cover Ass'y	1
2	E70081-001	Hinge Ass'y	2
3	See back cover	Turntable Covering	1
4	E24335-001	Turntable	1
5	E70082-001	Sheet	2
6	See back cover	Cabinet	1
7	E302591-001	Slide Knob	3
8	E70070-001	Knob (for speed)	1
9	E24352-003	Ornament	1
10	E69212-001	Mark	1
11	See back cover	Power Transformer ⚠	1
12	See back cover	Power Cord ⚠	1
13	QHS3876-162	Cord Stopper ⚠	1
14	E69884-002	Cord Holder	1
15	MC954B	Motor Ass'y	1
16	E302594-001	Lever	1
17	See back cover	P.C. Board Ass'y ⚠	1
18	E70079-001	Rod Holder	1
19	E70080-001	Spring	1
20	E302598-001	Cueing Lever	1
21	E70102-001	Repeat Rod	1
22	E70101-001	Cueing Rod	1
23	E70100-001	START/STOP Rod	1
24	QSM1V12-107	Micro Switch	1
25	QHS3876-252	Cord Stopper	1
26	See below	Tonearm Ass'y	1

Item No.	Part Number	Description	Q'ty
27	E302608-001	Cover	1
28	See page 10	Mechanism Ass'y	1
29	E69854-004	Insulator	4
30	E69855-004	Spring	4
31	E70103-001	Select Rod	1
32	E70042-001	Foot (for Rear)	2
33	E70071-002	Knob (for START/STOP)	1
34	E61194-007	Spring	1
35	E302599-001	S. Lever (for START/STOP)	1
36	See back cover	Voltage Selector ⚠	1
37	〃	Fuse ⚠	1
38	〃	Safety Case ⚠	1
39	E70097-001	Slide Lever Ass'y	3
40	EWS013-153	Socket Wire	1
41	E10822-001	Bottom Board	1
42	E70282-001	Rod Holder (for Select)	1
43	GBSF3008Z	Tapping Screw	4
44	GBSF3012Z	〃	1
45	GBSF3045Z	〃	4
46	SBSF3008Z	〃	27
47	SBST3025Z	Screw	4
48	SBST3008Z	〃	2
49	E70373-001	Foot Ass'y (for Front)	2
50	E70315-001	Knob Sheet	6

7-(2) Tonearm Assembly

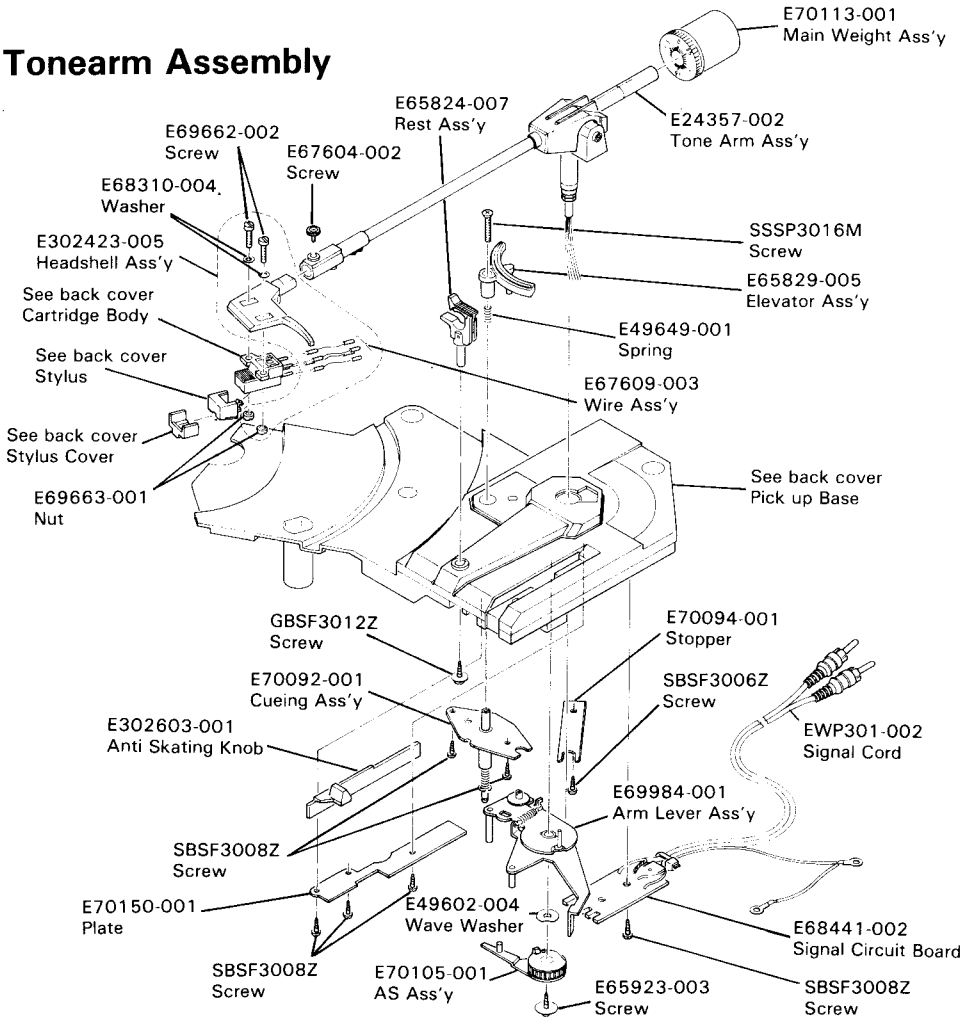


Fig. 36

7-(3) Mechanism Base Assembly

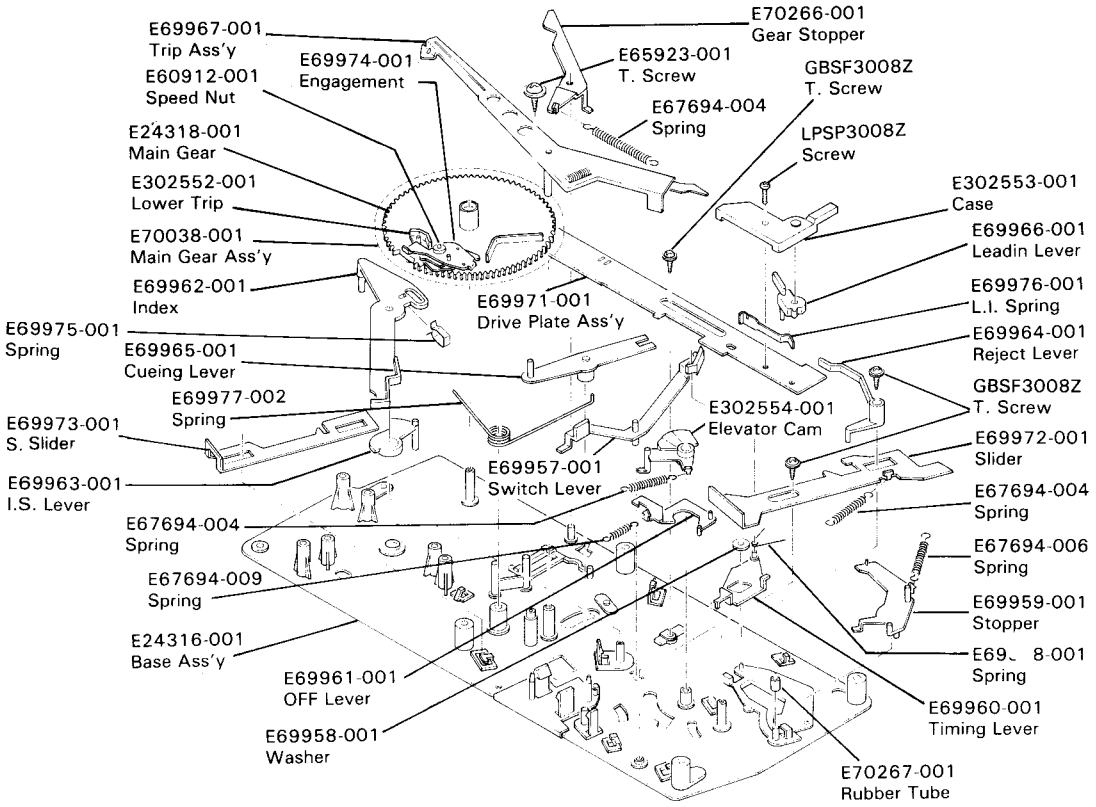


Fig. 33

8. Printed Circuit Board Ass'y and Parts List

8-(1) TXX-437A Power Supply P.C. Board Ass'y

Note: TXX-437□ varies according to the areas employed. See note (1)

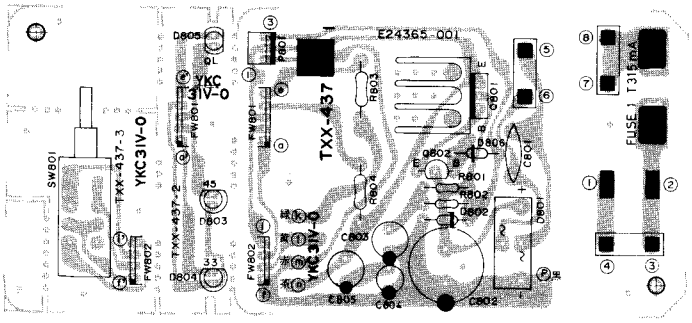


Fig. 34

Designated Areas	P.C. Board Ass'y
U.S.A. & Canada	TXX-437A
U.S. Military Market & Other Countries	TXX-437B
Europe, Australia & West Germany	TXX-437C
U.K.	TXX-437DBS

Item No.	Parts Number	Rating		Description
Q801	2SD313V(D,E)			Transistor
Q802	2SC945A(P,Q)			〃
D801	S1RBA20F1			Diode
D802	RD24EB3			〃
D803	SR603C			L.E.D.
D804	〃			
D805	SLA55MT5F			〃
C801	QCE22HP-103	0.01 μF	500 V	Ceramic Capacitor
C802	QET51HM-477	470 μF	63 V	Electrolytic 〃
C803	QET51HM-476	47 μF	50 V	〃 〃
C804	QET51EM-107	100 μF	25 V	〃 〃
C805	〃	〃	〃	〃 〃
R801	QRD148J-183S	18 kΩ	1/4 W	Carbon Resistor
R802	QRD148J-151S	150 Ω		〃 〃
R803	QRD125J-103	1 kΩ	1/2 W	Carbon 〃
SW801	QST4101-E09			Push Switch
	QMV5005-003			3P Plug Ass'y
	E69824-H25B			Heat Sink
	EWT011-055			Terminal Wire Ass'y
	EWS015-092			Socket Wire Ass'y
	EWR34A-15NN			Flat Wire Ass'y
	EWR34A-20NN			〃
	EMG7331-001	(for B)		Fuse Clip
	E24365-001			Circuit Board

8-(2) MC-945B Motor Driver P.C. Board Ass'y

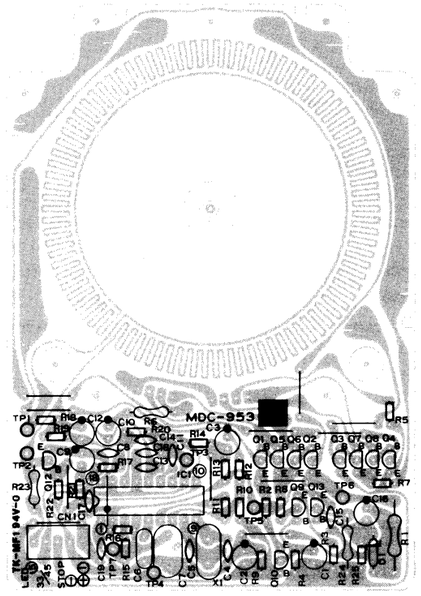


Fig. 35

Capacitors

Item No.	Parts Number	Rating	Description
C1	QET41HM-474	0.47 μF 50 V	Electrolytic
C2	QET41HM-225	2.2 μF "	"
C3	QET41HM-105	1 μF "	"
C4	QCT25CH-101	100 pF "	Ceramic
C5	"	" "	"
C6	QFM41HK-223	0.01 μF "	Film
C7	AWS104G-50	0.1 μF "	"
C8	QCF31HP-103	0.01 μF "	Ceramic
C9	QET41EM-226	22 μF 25 V	Electrolytic
C10	QET41HM-105	1.0 μF 50 V	"
C11	QCT25UJ-330	33 pF "	Ceramic
C12	QET41HM-106	10 μF "	Electrolytic
C13	QCF31HP-103	0.01 μF "	Ceramic
C14	QCY31HK-102	0.001 μF "	"
C15	QCF31HP-103	0.01 μF "	"
C16	QET41HM-106	10 μF "	Electrolytic
C17	QCF31HP-103	0.01 μF "	Ceramic
C18	"	" "	"
C19	QCF31HP-223	0.022 μF "	"
C20	"	" "	"

Intergrated Circuit

Item No.	Parts Number	Rating	Description
IC1	VC4052		IC

Transistor

Item No.	Parts Number	Rating	Description
Q1	2SC2120(O,Y)		Silicon
Q2	"		"
Q3	2SA950(O,Y)		"
Q4	"		"
Q5	2SA105(Y,GR)		"
Q6	"		"
Q7	2SC1815(Y,GR)		"
Q8	"		"
Q9	2SA1015(GR)		"
Q10	2SC1815(GR)		"
Q12	2SC1815(Y,GR)		"
Q13	2SC2120(O,Y)		"

Diode

Item No.	Parts Number	Rating	Description
D1	RD5.6EL3		Zener

Resistors

Item No.	Parts Number	Rating	Description
R1	QRX019J-2R7S	2.7 Ω 1 W	Metal
R2	QRD167J-181	180 Ω 1/6 W	Carbon
R3	QRD167J-101	100 Ω "	"
R4	QRD167J-332	3.3 kΩ "	"
R5	QRD167J-821	820 Ω "	"
R6	QRD141J-102S	1 kΩ 1/4 W	"
R7	QRD167J-471S	470 Ω 1/6 W	"
R8	QRD167J-102	1 kΩ "	"
R9	QRD167J-103	10 kΩ "	"
R10	QRD167J-163	16 kΩ "	"
R11	QRD167J-474	470 kΩ "	"
R12	QRD167J-104	100 kΩ "	"
R13	QRD167J-913	91 kΩ "	"
R14	QRD167J-104	100 kΩ "	"
R15	QRV146F-2702	27 kΩ 1/4 W	Metal
R16	QRD167J-474	470 kΩ 1/6 W	Carbon
R17	QRD167J-101	100 Ω "	"
R18	QRD167J-102	1 kΩ "	"
R19	QRD167J-104	100 kΩ "	"
R20	QRD167J-105	1 MΩ "	"
R21	QRD167J-101	100 Ω "	"
R22	QRD167J-183	12 kΩ "	"
R23	QRD141J-101S	100 Ω 1/4 W	"
R24	QRD121J-271	270 Ω "	"
R25	QRD167J-153	15 kΩ 1/6 W	"

Others

Item No.	Parts Number	Rating	Description
X1	LA-1157		X'tal
	QMV5004-005		Micro Connector
	VHE-101		Hall Generator
	M31469		P. Circuit Board

9. Power Cord Connections in Different Areas

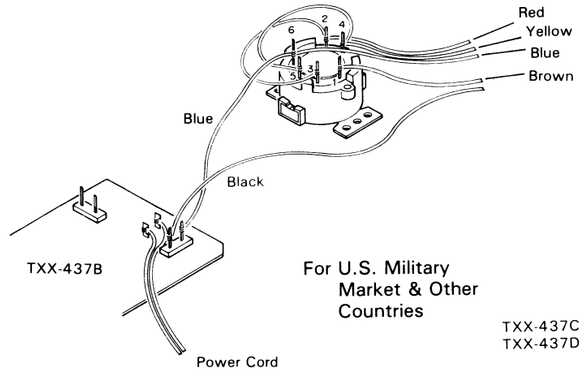
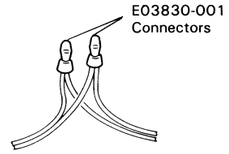
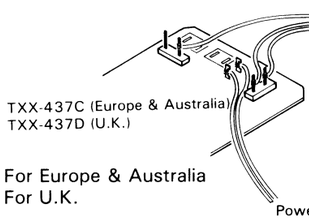


Fig. 36



For U.S.A. & Canada

Fig. 37



	Europe & Australia	U.K.
1	Gray	Blue
2	Brown	Brown
3	Blue	Gray

Fig. 38

How to Handle the Solderless Connector

In this turntable, a solderless connector is used to connect the power cord with the primary lead wire of the power transformer.
When it is unavoidable to replace this connector for replacement of the power transformer, or the like, positively perform the replacement in accordance with the following procedure to avoid dangers.

- **Connector part number**
  E03830-001
- **Tools**
  Tool for installing solderless connectors.
  Do not use those (small cutting pliers, etc.) other than regular tools.

Example: VACO No. 1963 (Courtesy Vaco Products Co.)

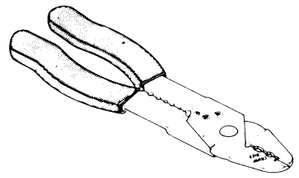


Fig. 39

- **Replacement**

1. Cut both the power cord and the primary lead wire at near the edge of the connector to be replaced.
   Note : Do not re-use the used connector.

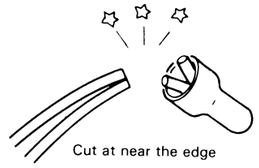


Fig. 40

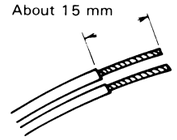


Fig. 41

2. Peel off the coverings so that the respective conductor tops appear by about 15 mm as shown in the Fig. 41.
   Note : In the case of stranded wires, teist each wire.
3. Adjust the tips of the power cord and the primary lead wire with each other, then securely insert them into the connector as shown in the Fig. 42.

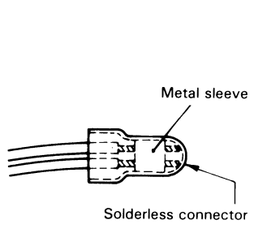


Fig. 42

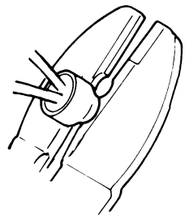


Fig. 43

4. Secure the nearly equal central part of the metal sleeve with the second concave of the tool for solderless securing as shown in the Fig. 43.
   Note : Perform a complete securing.
5. After solderless securing, check the following as shown in the Fig. 44.
   Note : Proted connector with isolation tape or vinyl tube for safety. Furthermore, clamp it for out of touch with metal part.

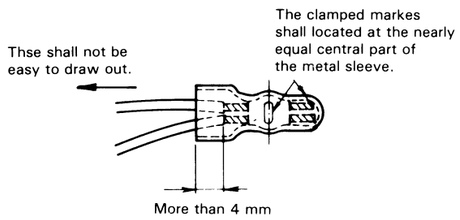

Thse shall not be easy to draw out.
The clamped markes shall located at the nearly equal central part of the metal sleeve.
More than 4 mm

Fig. 44

10. Accessories List

Item No.	Description	U.S.A. & (Canada)	U.S. Military Market & (Other Countries)	Europe & (Australia)	West Germany	U.K.
1	Instruction Book	E30580-1104A (")	E30580-1104A (")	E30580-1104A (")	E30580-1104A	E30580-1104ABS
2	Warranty Card	BT20047A (BT20025E)	BT20047A (—)	— (BT20029C)	BT20057	BT20013C
3	Service Information Card	BT20046B (—)	BT20046B (—)	—	—	—
4	EP Adaptor	E66329-002 (")	E66329-002 (")	E66329-002 (")	E66329-002	E66329-002
5	Siemens Plug	—	E04056 (")	—	—	—
6	Safety Instruction	BT20044D (—)	—	—	—	—
7	Envelope (for I.B.)	E300196-010 (")	E300196-010 (")	E300196-010 (")	E300196-010	E300196-010
8	Envelope (for W.C.)	E66416-003 (—)	—	—	—	—

11. Packing Materials and Part Numbers

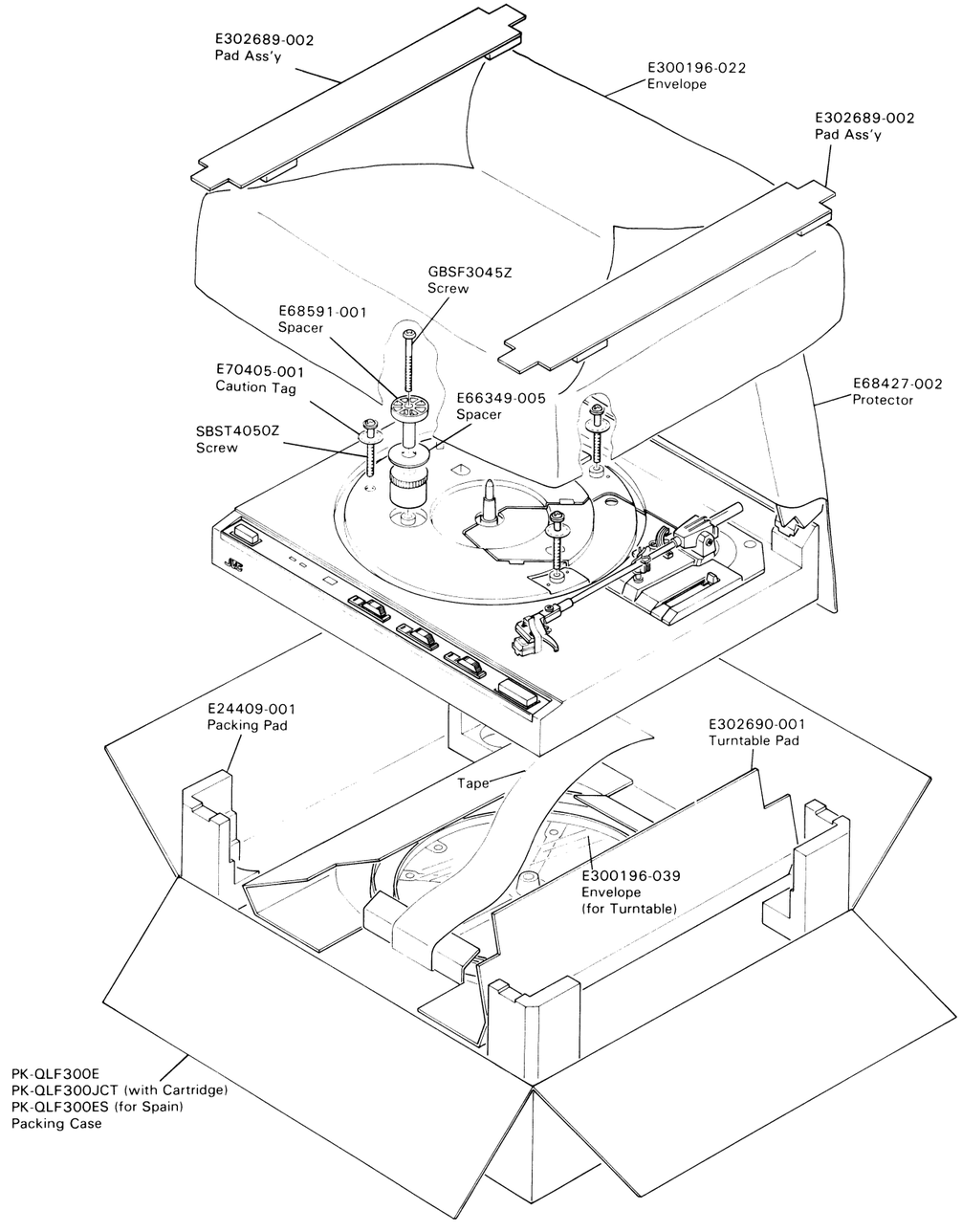
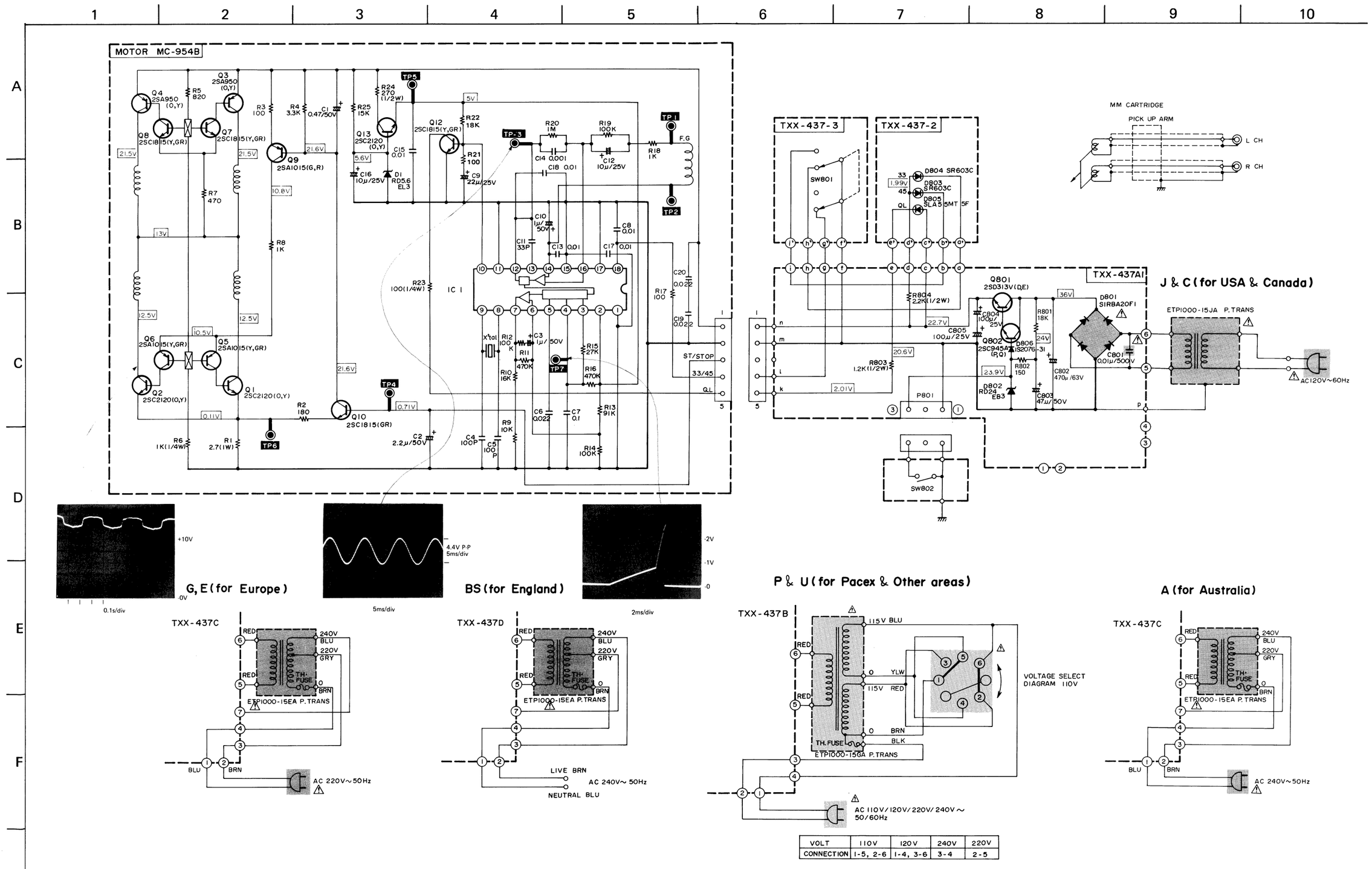


Fig. 45

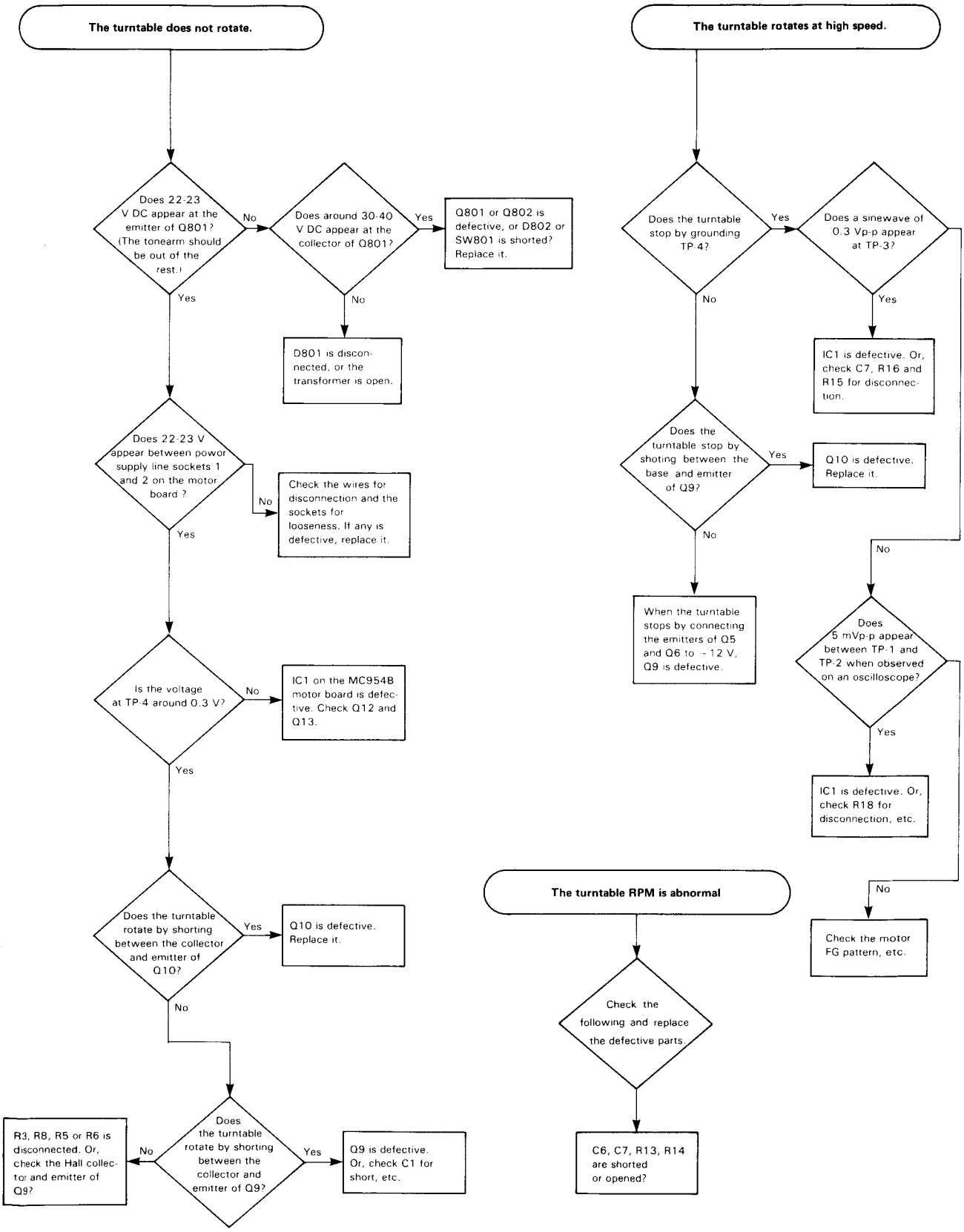
12. QL-F300 Schematic Diagram



VOLT	110V	120V	240V	220V
CONNECTION	1-5, 2-6	1-4, 3-6	3-4	2-5

Fig. 46

13. Trouble Shooting


The turntable does not rotate.
Does 22-23 V DC appear at the emitter of Q801? (The tonearm should be out of the rest.)
No
Does around 30-40 V DC appear at the collector of Q801?
Yes
Q801 or Q802 is defective, or D802 or SW801 is shorted? Replace it.
No
D801 is disconnected, or the transformer is open.
Yes
Does 22-23 V appear between powor supply line sockets 1 and 2 on the motor board ?
No
Check the wires for disconnection and the sockets for looseness. If any is defective, replace it.
Yes
Is the voltage at TP-4 around 0.3 V?
No
IC1 on the MC954B motor board is defective. Check Q12 and Q13.
Yes
Does the turntable rotate by shorting between the collector and emitter of Q10?
Yes
Q10 is defective. Replace it.
No
Does the turntable rotate by shorting between the collector and emitter of Q9?
No
R3, R8, R5 or R6 is disconnected. Or, check the Hall collector and emitter of Q9?
Yes
Q9 is defective. Or, check C1 for short, etc.
The turntable rotates at high speed.
Does the turntable stop by grounding TP-4?
Yes
Does a sinewave of 0.3 Vp-p appear at TP-3?
Yes
IC1 is defective. Or, check C7, R16 and R15 for disconnection.
No
Does the turntable stop by shoting between the base and emitter of Q9?
Yes
Q10 is defective. Replace it.
No
When the turntable stops by connecting the emitters of Q5 and Q6 to - 12 V, Q9 is defective.
No
Does 5 mVp-p appear between TP-1 and TP-2 when observed on an oscilloscope?
Yes
IC1 is defective. Or, check R18 for disconnection, etc.
No
Check the motor FG pattern, etc.
The turntable RPM is abnormal
Check the following and replace the defective parts.
C6, C7, R13, R14 are shorted or opened?

14. Parts List with Specified Numbers for Designated Area

Item No.	Description	U.S.A. & (Canada)	U.S. Military Market & (Other Countries)	Europe & (Australia)	West Germany	U.K.
1	Turntable Covering	E24351-001 (〃)	E24351-002 (〃)	E24351-002 (〃)	E24351-002	E24351-002
2	Cabinet	E10819-003 (〃)	E10819-004 (〃)	E10819-004 (〃)	E10819-004	E10819-004
3	Power Cord ⚠	QMP1200-200 (〃)	QMP7600-250 (〃)	QMP3900-200 (QMP2560-244)	QMP3900-200	QMP9017-008BS
4	P.C. Board Ass'y ⚠	TXX-437A (〃)	TXX-437B (〃)	TXX-437C (〃)	TXX-437C	TXX-437DBS
5	P.C. Board	E24365-001 (〃)	E24365-001 (〃)	E24365-001 (〃)	E24365-001	E24365-001DBS
6	Fuse Clip	—	EMG7331-001	—	—	—
7	Power Transformer ⚠	ETP1000-15JA (〃)	ETP1000-15GA (〃)	ETP1000-15EA (〃)	ETP1000-15EA	ETP1000-15EABS
8	Fuse ⚠	—	QMF51A2-R315 (〃)	—	—	—
9	Voltage Selector ⚠	—	QSR0085-001U (〃)	—	—	—
10	Connector	E03830-001 (〃)	—	—	—	—
11	Pick-up Base	E10825-007 (〃)	E10825-008 (〃)	E10825-008 (〃)	E10825-008	E10825-008
12	Tonearm	ARM-547 (〃)	MP-341S (〃)	MP-341S (〃)	MP-341S	MP-341S
13	Cartridge Body Ass'y	—	MD1055Z (〃)	MD1055Z (〃)	MD1055Z	MD1055Z
14	Stylus Ass'y	—	DT-55Ⅱ (〃)	DT-55Ⅱ (〃)	DT-55Ⅱ	DT-55Ⅱ
15	Stylus Cover	—	E302639-001 (〃)	E302639-001 (〃)	E302639-001	E302639-001
16	Safety Case ⚠	E302607-001 (〃)	E302607-001 (〃)	E302607-001 (〃)	E302607-001	E302607-001

⚠ : Safety part

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VICTOR COMPANY OF JAPAN, LIMITED, TOKYO, JAPAN

Printed in Japan
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